National Institute of Environmental Health Sciences

Characteristic air temperature distributions observed in summer and winter in urban area in Japan

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Abstract:

The air temperature distributions in August (summer) and December (winter) were measured in an approximately 15 ×15-km urban area in Hyogo Prefecture, Japan, in order to study the spatial distribution of the air temperature and to propose effective measures against the heat island phenomenon. The air temperature was measured mainly by using thermometer shelters installed in an elementary school and a junior high school. The characteristic air temperature distribution depended on the season. The air temperature was higher inland than in the coastal region in August but was higher in the coastal region in December. The air temperature index indicated that the area where higher air temperatures would most likely appear was 5 to 10 km inland from the coast in August and around the coast in December. The seasonal air temperature distribution was presumably due to the strength of solar radiation and anthropogenic exhaust heat.

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Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature: ☑

resource focuses on specific type of geography

Ocean/Coastal, Urban

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Japan

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified